

REMARKS

Prior to entry of the instant amendment, claims 1, 3-7, 9-11, and 25-36 are pending in the subject application. Claims 1 and 5 are independent.

By the instant amendment, claims 1, 5, and 11 are amended, claims 4 and 9 are cancelled, and claims 37-40 are added.

Claims 1, 3, 5-7, 10, 11, and 25-40 are presented for further or initial prosecution on the merits.

A. Asserted Obviousness Rejection

In the outstanding Office Action Made Final, claims 1, 3-7, 9-11, and 25-36 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0057445 to Kweon et al. ("the Kweon et al. reference"). Applicants respectfully traverse this rejection for at least the reasons set forth below.

Independent claims 1 and 5 each recite, *inter alia*, "the first metal layer is a ruthenium layer." Applicants respectfully submit that the Kweon et al. reference, whether alone or in combination with any other prior art of record, fails to disclose or suggest this aspect of claims 1 and 5.

Claims 1 and 5 presently recite, *inter alia*,

the lower electrode includes:

a first metal layer having a cylindrical shape and defining a cylindrical space; and

a second metal layer completely filling the cylindrical space defined by the first metal layer,

...

the first metal layer is a ruthenium layer

In the rejections of claims 4 and 9, the subject matter of which has been incorporated into claims 1 and 5, respectively, the Office Action Made Final asserted that the Kweon

reference discloses a first metal layer that is a ruthenium layer.¹ Applicants respectfully submit, however, that such a position is inconsistent with the rejections of claims 1 and 5, and is therefore improper.

In particular, the Office Action Made Final asserted that the first metal layer recited in claims 1 and 5 reads on feature 23 of the Kweon et al. reference.² Feature 23, however, is clearly described in the Kweon et al. reference as being “a diffusion barrier layer 23.”³ Further, the Kweon et al. reference fails to disclose, or even suggest, that the diffusion barrier layer 23 is a ruthenium layer. Accordingly, applicants respectfully submit that the Kweon et al. reference, whether considered alone or in combination with any other prior art of record, fails to disclose or suggest each and every element of claims 1 and 5.

In view of the above, applicants respectfully submit that claims 1 and 5, as well as claims 3, 6, 7, 10, 11, and 25-36 depending respectively therefrom, are allowable over the prior art of record. Therefore, applicants respectfully request that this rejection be favorably reconsidered and withdrawn.

B. New Claims

By the instant amendment, claims 37 and 38 are added to depend from claim 1, and claims 39 and 40 are added to depend from claim 5. Applicants respectfully request entry and examination of claims 37-40.

C. Conclusion

The above remarks demonstrate the failings of the outstanding rejection, and are sufficient to overcome it. However, while these remarks may refer to particular claim

¹ See, e.g., the Office Action Made Final mailed February 6, 2008, at page 9, which states, “Regarding claim 9, Kweon discloses the capacitor as claimed in claim 5, wherein the first metal layer is a ruthenium layer (Kweon, paragraph [0006]).”

² See, e.g., the Office Action Made Final mailed February 6, 2008, at pages 3 and 6, wherein FIG. 1B of the Kweon reference is described as including a lower electrode having layers 23 and 24.

³ The Kweon et al. reference, paragraph [0023].

elements, they are not intended to, nor need they, comprehensively address each and every reason for the patentability of the claimed subject matter over the applied art. Accordingly, applicants respectfully submit that the claims are allowable for reasons including, but not limited to, those set forth above, and patentability of the claims does not depend solely on the particular claim elements discussed above.

The remaining documents cited by the Examiner were not relied on to reject the claims. Therefore, no comments concerning these documents are considered necessary at this time.

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,

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PETITION and
DEPOSIT ACCOUNT CHARGE AUTHORIZATION

This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying-papers may also be charged to Deposit Account No. 50-1645.